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COOPERATION SOUTH

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The TCDC emblem on our cover displays a symbolic bridge joining the countries and people of the Southern hemispheres. The centre of the emblem—where the Southern, Northern, Eastern and Western parts of the world all join—symbolizes a further and ultimate objective of TCDC: the enhancement of truly global partnership for development.

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A Grameen Bank borrower in Bangladesh after receiving her loan. See "The Grameen Bank: Replicating a Success Story," page 3.

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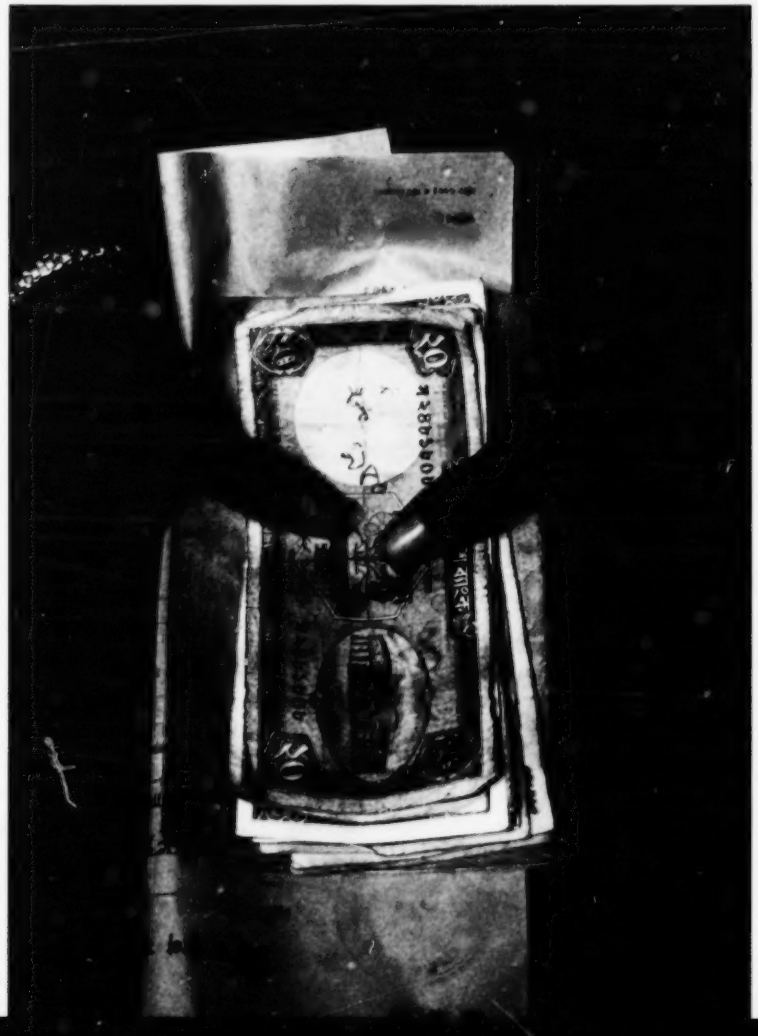
World Development

The Grameen Bank: Replicating a Success Story

An outstanding example of appropriate technology in the area of finance is the Grameen Bank of Bangladesh, which has achieved spectacular success as a supplier of credit to poor people in rural areas. Through South-South cooperation, the Grameen system has been adopted in many countries of Asia, Latin America and Africa. Here Angela Marianne Kuga Thas outlines the history of the bank and describes its replication in Malaysia



READEX FICHE

Grameen borrowers in Bangladesh at one of their weekly meetings with a bank representative.

Laili Begum lived in the tiny village of Jobra, Bangladesh, eking out a meagre living by making stools out of bamboo. In order to buy the bamboo she had to borrow money from the trader who bought her goods. He took advantage of the situation by paying her a very low price, leaving her a daily wage of only one *taka*—the equivalent of about three cents in US currency.

One day in 1976 an economics professor named Muhammad Yunus, from the nearby University of Chittagong, came to the village to examine the causes of rural poverty at first hand. After talking to Laili Begum he offered to lend her the equivalent of US$30. This meant that she could buy bamboo without borrowing from the trader and therefore could demand a higher price for her stools.

Encouraged by the success of this experiment, Professor Yunus began lending to other rural women. Thus was sown the seed of what became the Grameen (meaning "rural") Bank. It broke all the conventions and hallowed principles of banking, for it gave out loans only to the poorest of the poor, demanding neither collateral nor guarantor. In its early years, it tried working through nationalized commercial banks, but this did not work well. The banks were reluctant to do business with the landless and illiterate.

In 1983, with financial support from the Central Bank of Bangladesh, the International Fund for Agricultural Development, the Ford Foundation and bilateral donors, the Grameen became a bank in its own right. Since then, even the bank's admirers have been astonished by the speed of its growth. In Bangladesh it now operates in 23,000 villages and has nearly one million borrowers, with a repayment rate of over 98 per cent. The Grameen currently charges the normal commercial bank interest rate of 16 per cent, which is far lower than the rate charged by moneylenders.

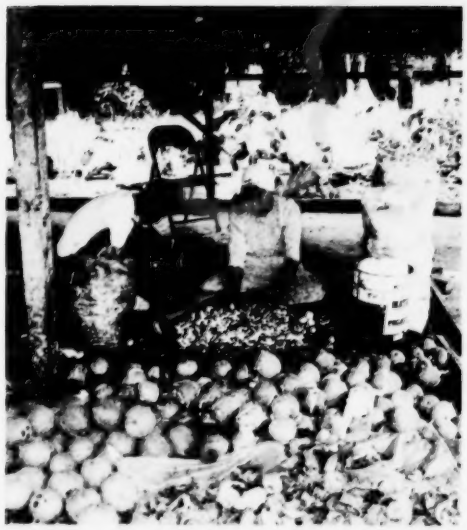
Interestingly, 91 per cent of the borrowers are women. "We find," says Professor Yunus, "that giving loans to women brings greater benefits to the family, as women tend to be more far-sighted and more concerned for the long-term security of the household."

As well as lending money for income-generating projects, the bank also makes housing loans for a standard $300 dwelling, designed specially by and for Grameen customers. In addition, the bank has a savings scheme which has enabled thousands of poor Bangladeshis to accumulate bank deposits for the first time in their lives.

Inspired by the success of the Grameen, many other countries have sent development experts and banking specialists to Bangladesh to study the bank's methods. Developing countries where it has been replicated include Bolivia, Burkina Faso, Colombia, Guinea, Indonesia, Kenya, Malaysia, Mali, Malawi, Nepal, Pakistan, Peru, Philippines, Sri Lanka and Zambia. It has also been adopted in Canada, France and the United States where it is being used to help people on welfare to become income-generators.

In Malaysia, what started out in 1986 as a humble experiment to test the replicability of the Bank's credit delivery system is now a nationwide programme. The Malaysian version of the Grameen is operated by a trust called Amanah Ikhtiar Malaysia (AIM), which was launched with support from the Malaysian Islamic Economic Development Foundation (YPEIM), the Asian and Pacific Development Centre and the government of the state of Selangor. With an initial grant of $120,000 from YPEIM, it was possible for AIM, unlike the Grameen, to extend loans interest-free.

AIM now operates in nine out of 13 Malaysian states, covering 612 villages. As of February, AIM had disbursed a total of $640,000 to 3,986 borrowers, of whom 98 per cent are women. AIM has managed to maintain a repayment rate of 99 per cent. An initial loan can be up to $180, and a second loan up to



Some of the people and activities assisted by the Grameen Bank and its counterparts. *Top left:* Mat-weaving in Bangladesh. *Top right:* Making coconut milk in Malaysia. *Bottom left:* A brick kiln in Sri Lanka. *Bottom right:* Malaysian herbalist Makcik Wak Saliam, who also runs a coffee shop and works as a midwife.

$360. For all subsequent loans, the maximum is $720.

One of AIM's branches is at Sungai Besar in the Sabak Bernam district. Its oldest borrower is Makcik Wak Saliam, who was 73 years old when she took out her first loan of $200 in 1987. With it she started a small coffee shop, selling herbal medicines on the side. She also works as a midwife. Currently paying back her third loan, Ms. Saliam hopes to receive her fourth. She declares: "As long as I have my health and God is willing, I will continue with my business."

Ms. Saliam is only one of AIM's many successful borrowers. Two others, Puan Kamsiah and Cik Zaleha, have done so well that they both hope for bigger loans from the Islamic Bank with AIM as guarantor. Ms. Kamsiah used all her five loans to expand her coconut milk business. Profits were big enough to enable her to employ extra workers and to build a brick house, to the envy of her neighbours.

Ms. Zaleha hopes soon to "graduate" from AIM. The profits from her shop, selling small domestic accessories, have enabled her to sustain herself, her husband and six children while she waits for the Islamic Bank's reply to her application for a loan of $3,600. At present, she gets her stock from a middleman. "If I get the loan," she says, "I will use it to buy a car so that I can purchase the items from the wholesaler myself."

Not all borrowers have been as successful as these three women. Some first-time borrowers fail because of mismanagement or misfortunes such as livestock and crop diseases or bad weather conditions. In such cases the borrow-

ers are encouraged to try again using a second loan.

Experience shows that there are certain basic features of the Grameen system that are essential for effective replication. For example, the bank uses an unambiguous eligibility test, which ensures that only the poor or very poor can participate. One of the requirements is that borrowers must be rural people owning no more than half an acre of cultivable land. Another feature of the Grameen's style of operation is that bank staff visit residences to interview each loan applicant.

A cornerstone of the Grameen system is the requirement that borrowers form themselves into mutual support groups of five people, with one member designated as leader. Each group has to meet once a week with the bank worker assigned to it. These consultations take place in "centres," local meeting places where several groups gather together. Loan proposals are discussed, and weekly repayments and compulsory savings deposits are accepted.

The loans are not simultaneously disbursed to every member of a group. The two poorest members receive their loans first. If, after a few weeks, there have been no repayment problems, the next two members will receive their first loans. The group leader is always the last to receive her first loan.

Because the groups are so small, the members know each other's activities intimately, reducing the possibility of misconduct. The five members provide mutual support while simultaneously acting as a peer pressure group to ensure that the loans are properly utilized and repayments made promptly. When an individual is having trouble with repayment, the group discusses the problem and tries to help find a solution. The system also facilitates the processing of loans and reduces the bank's operating costs.

The Grameen Bank discourages borrowers from paying back their loans too quickly. The scheduled weekly repayments are there for a reason. In the past the bank found that people would dig themselves deeper into debt by borrowing from moneylenders to repay their Grameen loans and thus qualify more quickly for their second and bigger loan.

All of these features are important factors in the success of the Grameen system. Perhaps most important of all, however, has been the autonomy enjoyed by the bank. The Grameen has always been free from direction by the Government of Bangladesh and its other sponsors. This has allowed it to experiment freely, discarding operational methods that did not work and improving on those that did. This autonomy has enabled the bank to develop the key features of its credit delivery system that have been so effective in providing a viable banking service for the poor.

The experience of Amanah Ikhtiar Malaysia shows how important it is for replicators to stick closely to the Grameen Bank's essential operating principles and procedures. The Malaysian replication project was originally problem-ridden because AIM was too lenient with borrowers, relaxing many of the requirements. Fortunately the mistake was quickly realized and rectified.

Salutes from a group of borrowers at a Grameen Bank gathering in Bangladesh.

Despite the undoubted success of the Grameen Bank system, there is still room for improvement. For example, borrowers may need loans which are larger than the Grameen system can provide but which they are too poor to obtain elsewhere. Could the Grameen Bank or its replications perhaps act as a guarantor for such borrowers? If so, what would happen if these borrowers were to default on their loans? In seeking answers to such questions, one should bear in mind the words of Professor Yunus: "Always start in a very low-key and small way. Go slowly at first. You can pick up speed when everything looks perfectly in order." ■

Banker to the Rural Poor

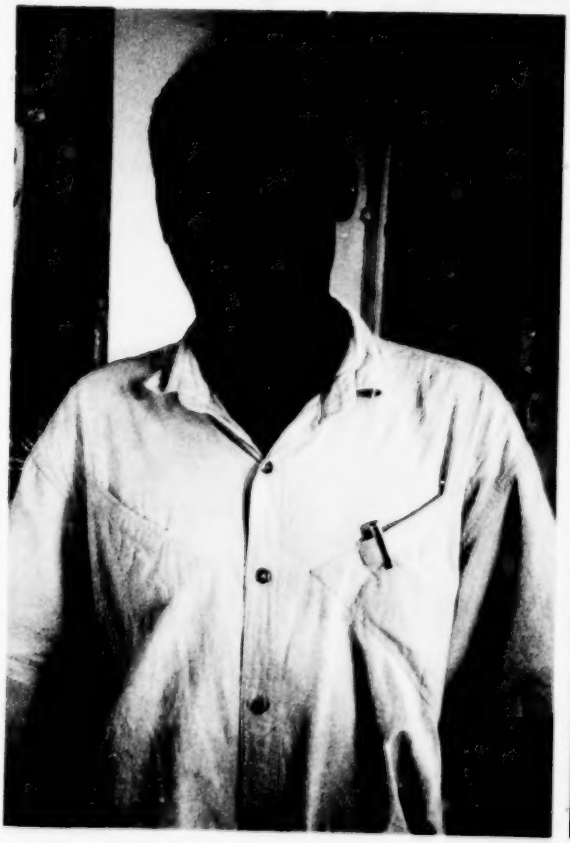
To deny people access to financial resources is to deny them a basic human right," says Professor Muhammad Yunus, founder and managing director of the Grameen Bank. Born in Bangladesh in 1940, Professor Yunus acquired a Ph.D in economics at Vanderbilt University in the United States and taught the subject for many years at the University of Chittagong, Bangladesh. He started the Grameen Bank in 1976 after finding that traditional economic theory did not provide a solution to the problem of poverty in his country. Now he has left academic life to devote himself entirely to the bank.

He is pleasantly surprised by the way in which the bank has been so quickly and readily accepted in other developing countries. "The replication of the Grameen Bank is an excellent example of South-South cooperation," he says. "When someone from another country wants to learn about the Grameen system, we invite them to come to Bangladesh and spend some time in the villages, talking to borrowers and bank personnel. The system is essentially so simple that there have been few problems in adapting it outside Bangladesh."

Professor Yunus has seen his creation turn into something far bigger than he ever imagined when he made his first loan 15 years ago. Yet his original vision remains the same.

"Even very small loans," he says, "can give poor people the possibility to change their own lives and untie themselves from the bonds of dependency. This is the essential message that we want to convey."

Through South-South cooperation that message is now being carried around the world.—**C.M.**



Wildlife Conservation: India Shares Its Experience

The Wildlife Institute of India is finding new ways to reconcile conservation with the interests of local people, and now other developing countries are studying India's methods, as Denise Barricklow reports

In the developing world, environmentalists committed to saving endangered creatures have often unwittingly ended up pitting themselves against some of the poorest people on earth—people whose very survival is in direct conflict with that of the animals. Most wildlife preserves in developing countries are home not just to animals and plants, but also to thousands of impoverished game hunters, cattle rearers and farmers, who could not live without the food, fodder or fuel they obtain from the protected areas.

Finding a way to reconcile this conflict of interest between animals and people is no easy task. But at the Wildlife Institute of India at Dehra Dun, in the northern state of Uttar Pradesh, a staff of experienced forest rangers and trained scientists have been making a concerted effort to address this dilemma.

In a break with tradition, the institute, which receives funding from the United Nations Development Programme (UNDP) and the Food and Agriculture Organization of the UN (FAO), urges its trainees to look beyond the policing and caretaking roles of their jobs and develop better management and human relations skills.

"Many conservation efforts interfere with people's livelihoods and lifestyles," says V.B. Sawarkar, head of the faculty of wildlife management at the institute. "Our trainees are encouraged to think of options for these people. It's very different from straightforward forestry conservation."

Martin Mwanza, 24, an assistant wildlife ranger at the Luangwa North National Park, in Mdika, Zambia, is enthusiastic about the instruction he has received at the institute. Mr. Mwanza oversees 56 wildlife scouts at his park. He was eager to return home so he could implement some of the problem-solving strategies he learned during his three-month management training stint at the institute.

"Poaching has been a problem for a long time in our park," Mr. Mwanza says. "We apprehend at least 75 people a year and take them to the police. But they just come back to poach again. They need food to eat.

"But here I've been taught that when you deal with the villagers you need to provide them with some alternatives. What I plan to do now is try to organize my scouts, when they do controlled hunting in the park, to bring back what they kill and supply our villagers with the meat."

Mr. Mwanza says he will also use this same type of creative management approach in dealing with another difficulty that has arisen in his park: tourism. "We just allowed tourists to come into the park, and we did not pay enough attention to the problems they can cause," he explains. "Usually tourists come to enjoy themselves, have some recreation. So they do anything they want to—they feed the animals, they throw things at them, they start forest fires.

"I learned that we have to lay down some rules of behaviour, maybe install some posters at the entrances to the park. We also need to have someone to act as a guard, to tell the people what they can and cannot do."

More than 60 wildlife experts receive mid-career training at the institute each year. Like Mr. Mwanza, a number of them are forestry workers from developing nations such as Bhutan, Nepal, Sri Lanka and Zaire, who compete for grants offered by the Indian government to study at the facility. ■

Above: **Bengal tiger, a protected species in India.**

Left: **Animal skins confiscated from poachers in an Indian wildlife preserve.** ***Far left:*** **Martin Mwanza, a ranger from Zambia, who received supplementary training at the Wildlife Institute of India.**

Technologies for Women: How TCDC Can Help

Angelika Pradel discusses how women in developing countries can benefit each other by sharing appropriate technologies through South-South cooperation

Long before the sun comes up over the Andes, Carmen Mamani Hinohoza begins her 17-hour working day. In the dark and chill of the early morning, while her seven children are still asleep, the 45-year-old Peruvian woman walks two miles to the river, sometimes having to make her way by the dimmest of starlight. Carrying two buckets of water, she walks back home where she kindles a fire in the little adobe oven, using dried manure. She then feeds the bull, the pig and the three chickens, which make up the family's livestock. After that she starts to grind quinua, a grain widely used in Latin America for its nutritional value.

The grinding method she uses is very laborious. Kneeling down, with the quinua spread out on a large, flat stone in front of her, she holds a heavy, rectangular stone and rubs it over the grain with strong, rhythmic movements of her entire body. Grinding sufficient quinua for the whole family takes her about an hour. With the flour thus produced she bakes a couple of dozen pancakes, which she eats with her family before they all begin working in the fields. Altogether, it is a back-breaking routine, which probably contributed to causing the two miscarriages that she has suffered.

However, this exhausting daily grind is not inevitable for women like Ms. Hinohoza. A small amount of money could equip her with simple, labour-saving technologies of a kind that have long been available to women in other developing countries.

Take Laila Custandi, for example, who lives in a poor rural village in Egypt. She does not need to carry buckets of water every day because she uses the family's bull to do the work, using a technology that has been employed in Egypt for centuries. The bull turns a horizontal wheel, connected to a pump which draws the water from a well just outside her home. Assuming a convenient source of underground water, this technique could be much more widely used in the developing world.

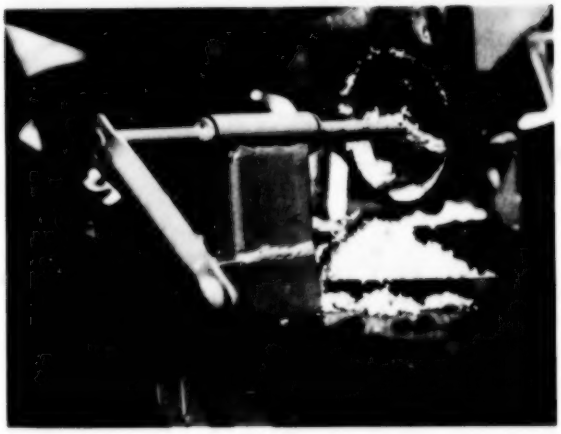
Similarly, women in the northern states of India have a much better technique for grinding grain than the one used by Ms. Hinohoza. The grain is placed between two stone wheels connected at their centres by a wooden stick. A woman grinds the grain by turning the upper wheel, holding it by a handle. It takes strong arms, but is much quicker and easier than the Peruvian method.

There are countless other examples of equally simple, appropriate technologies that can help women in developing countries, either by reducing their workload or by giving them the means to generate income. Unfortunately, many of these technologies remain unknown outside the areas where they were invented, often by women themselves. Consequently women such as Carmen Mamani Hinohoza are left using inefficient methods.

However, there are some encouraging examples of technologies that have been disseminated among developing country women through South-South cooperation. One such technology is the chorkor fish-smoker, an oven with a stack of 10 to 15 smoking trays, which helps to preserve the fish and enhances its taste and nutritional value, thereby making it more marketable. The chorkor smoker was originally developed by Ghana's National Council on Women and Development, under a project supported by the Food and Agriculture Organization of the UN, UNICEF and the UN Development Fund for Women. It has proved a highly effective income-generator and, through technology transfer, has spread to Benin, Guinea and Togo.

In Peru, Carmen Mamani Hinohoza uses a laborious method of grinding quinua.

Another income-generating device that has benefited women is the manual coconut grater developed in Guyana. It is operated by cutting a coconut in half and pressing it against a toothed piece of metal which gouges out the flesh as a handle is turned. The device is a great improvement on the time-consuming traditional method breaking the coconut into pieces and then grating the flesh using perforated tins. Designed by Farrall's Engineering of Guyana at the initiative of the Women's Revolutionary Socialist Movement, the grater has enabled many women to set up in business making coconut confectionery. Others



Above: **A manual coconut grater developed in Guyana.**

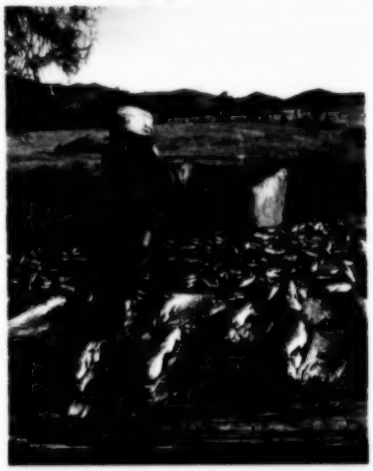
Right, top to bottom: **Three other examples of simple devices that can help women in developing countries cut their workload and generate income: push-cart in Burkina Faso, fish smoker in Kenya and solar oven in India.**

have been able to use the fibres to make mattresses. Through women's networks the grater has now been widely adopted in the Caribbean.

While these examples are encouraging, much more could be done through TCDC to disseminate appropriate technology among women. It must be recognized that women's technological needs are often different from those of men, since they are traditionally involved in a different range of activities. Therefore, if TCDC is to benefit all levels of the population, it must address the special requirements of women. In doing so, it can build on the ground already ably prepared, despite their limited resources, by numerous non-governmental organizations and women's networks.

Experience shows that, to ensure a successful exchange of technology between women of different countries, several crucial factors have to be taken into consideration. Not just the technology itself but also the way of introducing it must be appropriate. It must be done in a way that is sensitive to local requirements and allows the women to alter and adapt the technology as they see fit. It is also necessary to make careful provisions for training and to consider how the equipment involved can best be manufactured and distributed. In order to spread a technology effectively it may be necessary for women to organize themselves into user groups.

As long as women like Carmen Mamani Hinohoza do not have access to the labour-saving technologies enjoyed by Laila Custandi, every effort should be made through TCDC to put this right and enable them to conduct their everyday tasks with human dignity. ■



Strengthening Technical Cooperation in Latin America and the Caribbean

This year's meeting of the Latin American Economic System (SELA) reflected the region's continuing commitment to TCDC, as Christopher McIntosh reports

Caracas, Venezuela—The annual council meeting of the Latin American Economic System, held each September, is always a lively event, and this year's gathering was no exception. The most important outcome of the meeting was a series of decisions relating to TCDC. Governments were urged to give their backing to TCDC at the highest possible level and to establish more coordinated national focal point systems, and approval was given to a proposal for a training seminar for focal points. Delegates also emphasized the need for greater financial support for TCDC from both developing and developed countries as well as from the United Nations system and other international sources. In addition, it was recommended that regional TCDC programming exercises be held in the areas of international trade, industrialization, intellectual property, handicrafts and the environment.

These decisions were based on recommendations by a technical working group of national TCDC focal points, which was convened separately from the main ministerial council meeting, to focus on specific issues of technical cooperation and to arrange bilateral exchanges.

Latin American and Caribbean countries represented at the working group were: Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Grenada, Guyana, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Uruguay and Venezuela. Also present were representatives of various United Nations agencies and other international bodies.

UNDP's Special Unit for TCDC was represented by Abebe Ambatchew, the Unit's Director, and by Graciela Vazquez-Diaz, senior regional officer for Latin America and the Caribbean. The Special Unit contributed financial support for the participation of national focal points at the meeting.

Speaking at the opening session of the technical group, Mr. Ambatchew said that much more could be done to realize the full potential of TCDC. Necessary improvements he mentioned included creating a better climate for TCDC through greater commitment and wider application of the modality, expanding information and database capacities, streamlining the procedures for consultation and exchanges, and strengthening the focal point system.

The question of focal point strengthening and the preparation of a TCDC strategy for the 1990s were the main topics for discussion by the technical group. Many of the delegates felt that focal points needed to be given more forceful government backing and greater resources within the context of a well defined policy. The delegate from Ecuador, Augusto Segura, suggested that there should be a regional training seminar for focal points and said his country would be willing to host the event. This idea was enthusiastically endorsed by the other delegates, who agreed with a suggestion by Mr. Ambatchew that the seminar should be held immediately before next year's SELA meeting.

Among United Nations agency representatives who spoke were José María Salazar and Jorge Peña Mohr, both from the Pan American Health Organization (the regional branch of the World Health Organization). They briefed delegates on preparations for a number of sub-regional meetings on technologies for primary health care, leading up to a regional TCDC pro-

gramming exercise on the subject, to be held in Chile in March 1992. The meetings will deal with such issues as medical supplies, cooperation in research and development, and harmonization of standards and regulations. The Special Unit for TCDC is contributing US$172,000 for transportation and living expenses of participants, and the Pan American Health Organization is providing $272,000 for technical support, in coordination with SELA.

Another important part of the meeting's agenda was devoted to bilateral negotiations, from which a number of project agreements emerged. A project involving training in air traffic control was agreed between Nello Raphael, the delegate from Trinidad and Tobago, and Iwan Sewberath Misser from Suriname. Trinidad and Tobago, which has its own airline and training institute, is well placed to assist Suriname in establishing a training programme.

The Panamanian delegate, Georgina Osorio, held discussions with a number of other delegates, including Edith Montero Ruales from Peru and María Claudia García from Colombia. "Panama wants to develop its micro-enterprise sector to reduce unemployment," Ms. Osorio explained. "In Peru, micro-enterprises make up a large section of the economy, and they have developed a system of laws and institutions to regulate this sector. We plan to use funds from our UNDP-supported TCDC umbrella project to bring Peruvian experts to Panama to conduct a seminar." Ms. Osorio also arranged an agreement to send two agriculturalists to Colombia to study methods of international cooperation in agriculture.

Bilateral discussions also took place between Augustin Sanchez Vasquez of Mexico and José Rodrigo Ortiz of the Dominican Republic. "We discussed cooperation in a number of areas," Mr. Sanchez said, "including tourism, where our countries have complementary experience. We hope this will be the beginning of a fruitful partnership."

The subject of information technology featured in both the TCDC technical group and the ministerial meeting, and progress reports were given on SELA's three databases. TCDC/INRES-South and INFOSELA, a database on countries' capacities and needs, are already in operation at SELA under the supervision of TCDC coordinator Rosario Diaz and information systems technician Nora Aharonian. Another data system, PESICRE, recording cooperation projects carried out by regional institutions, is well established and likewise proving of great value. PESICRE provides institutions with instant access to detailed information about each other's projects, enabling them to avoid duplication of effort and to complement each other's work. Various delegates were given individual demonstrations of the PESICRE system by its coordinator, José Kutos Flisar.

In the words of SELA's Deputy Permanent Secretary, Noel Sinclair of Guyana, SELA has taken on the character of a regional TCDC focal point, which can serve as an inspiring example to other regions. The vitality and scope of this year's meeting prove that, despite the region's external debt problem and other difficulties, TCDC in Latin America and the Caribbean is a modality that is being increasingly widely used in the implementation of development activities. ■

Top: **Some of the national focal points from Latin America and the Caribbean who attended the SELA meeting.**

Bottom: **José Kutos Flisar (*right*) demonstrating SELA's PESICRE data system.**

Profile

Carlos Andrés Pérez, President of Venezuela

Following a recent interview with President Pérez, Christopher McIntosh writes about the Venezuelan leader's efforts in the cause of Latin American integration and his hopes for the future

Caracas, Venezuela—One of the reasons for the growing success of South-South cooperation in Latin America is the work of Carlos Andrés Pérez. For many years, Venezuela's charismatic President has striven to bring the countries of the region closer together, and now his efforts are bearing fruit. Not surprisingly, he often invokes the name of Simon Bolivar, the great 19th-century liberator and fighter for Latin American unity.

President Pérez's political career has been a long and colourful one. Born in 1922 in Táchira state on the border with Colombia, he was already active in politics as a high school student. "It is perhaps because I was born in a border area," he says, "that I have always attached such great importance to cooperation between the countries of this region."

After graduating from law school, he became active in the Democratic Action party and was elected to the Chamber of Deputies. During the dictatorship of Pérez Jimenez (1952-58), he lived in exile in Cuba and later in Costa Rica where he edited a newspaper. Returning to Venezuela with the fall of the dictator, he re-entered the Chamber of Deputies and later became Minister of the Interior in the government of Rómulo Betancourt. He served his first term as President from 1974 to 1979 and, after an interval out of office, was re-elected President in 1988.

President Pérez believes that South-South cooperation in Latin America is now coming into its own after a long period in which it was hampered by political and economic factors. "In the 1970s we used to talk a lot about integration, but very little was done. Our economies were hostile to one another. They were based on protectionism and subsidies. This made integration impossible."

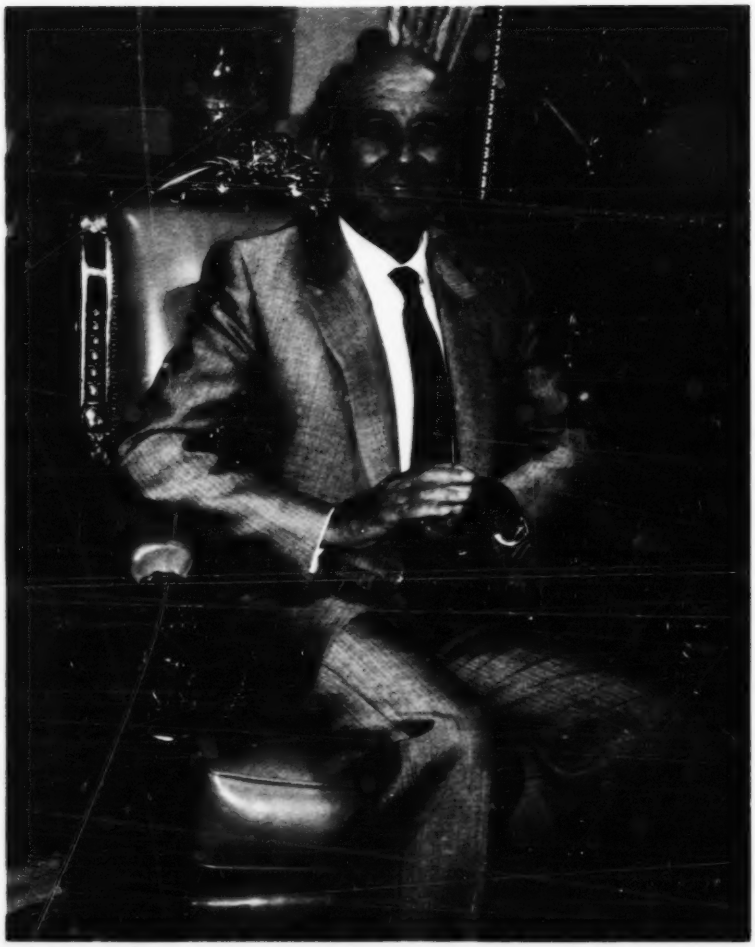
This situation changed, he says, with the onset of the external debt crisis in the early 1980s. The majority of Latin American countries undertook economic reform programmes that involved cutting subsidies and curtailing protectionist policies. "After that, integration began to be feasible, and it is in the last decade that the process has really begun." Paradoxically, therefore, the debt crisis, which has hit the region so hard, has also had an indirect benefit.

The President feels that his country has, as he puts it, a special "vocation" to carry forward Bolivar's vision of an integrated Latin America. "Venezuela has a great advantage," he says, "in its strategic geographical position in the north of South America, close to Central America as well as to the Andean countries and the Caribbean. Our country also has enormous natural resources. All this contributes to our sense of obligation to promote cooperation in the region."

In his two terms of office, President Pérez has taken many initiatives to bring the region closer together and has demonstrated that technical cooperation flows much more readily when countries are linked by institutional structures. A case in point is the Latin American Economic System (SELA), of which the Venezuelan President was a founder in 1975. Based in Caracas, SELA has become a forum for TCDC focal points throughout the region, a clearing-house of information on TCDC exchanges, and an active promoter of technical and economic cooperation.

A recent major TCDC initiative supported by President Pérez is the Bolivar Programme, a scheme to boost high technology in Latin America and the Caribbean. It is helping public and private companies and institutions of the region to pool their resources, share research facilities, establish joint ventures and improve their products in order to conquer new markets. The programme, launched in May, is backed by seed capital from the Venezuelan government and by contributions from SELA and UNESCO. The President believes this scheme will help to harness the tremendous technological capacities that exist in the region.

President Pérez believes that TCDC efforts of this kind should go hand-in-hand with economic cooperation among developing countries (ECDC). One of the ways in which he has promoted ECDC is through the San José agreement with Mexico, whereby the two



nations agreed to supply the countries of Central America with oil at subsidized prices. This was made possible by the nationalization of the oil industry by the Pérez government in 1976.

"Some people," he says, "have criticized us for this policy, but the result of it has been a reciprocal expansion of business in Central America for Venezuelan companies."

In the same spirit, he is supporting efforts to establish a free trade zone between the countries of the Andean Pact (Bolivia, Colombia, Ecuador, Peru and Venezuela). He would also like to see an expansion of trade with the countries of the Caribbean as well as with other regions of the world.

He sees the world as being in the necessary process of forming itself into a series of large economic blocks, of which Latin America is one. "We need," he says, "to develop a southern hemispheric market. A lot of the products that are imported from the North could be produced and exchanged in the South." At the same time, he emphasizes: "We do not see South-South cooperation as a means of confronting the countries of the North, but rather as a step towards improving our relations with them."

President Pérez's role in Latin America has not prevented him from also being active in the global arena. He played a prominent part in the South Commission, a group of representatives from developing countries, set up in 1987 under the chairmanship of the former Tanzanian President, Julius Nyerere, to examine the problems facing the South and to suggest strategies for its future. The Commission's report, *The Challenge to the South*, published last year, sets out a series of proposals for the "awakening of the South," as President Pérez phrases it.

Looking to the future, the President takes a positive view. "I am fundamentally optimistic," he insists. "I was one of the few leaders who predicted that the coup in the Soviet Union would fail. I see events there as very hopeful. They have put an end to the Cold War and the bipolar world. Now we have to be careful to avoid the dangers of a unipolar world, and it is important that we strengthen international institutions including the United Nations. We must develop international justice more satisfactorily. In the new order a new kind of interaction will spring up between countries.
Ideological confrontation will be replaced by dialogue and understanding. We will speak less and less of military power and more and more of economic relations." ■

TCDC: The Language Aspect

South-South cooperation is frequently a multilingual process. Lori Green examines how this affects the patterns of technical exchange and how countries bridge the language gap

In the biblical story of the Tower of Babel, the attempt to raise a skyscraper to heaven was thwarted when God made sure that the builders were unable to understand each other. Since the failure of this early attempt at international technical cooperation, the nations of the world have found ways to overcome the language barrier when collaborating with one another. Language, however, is still a factor that profoundly affects patterns of international cooperation, including TCDC.

The colonial era left the South divided into various linguistic groupings of nations. In some cases a common language is shared by the countries of a region—for example, Spanish in most of Latin America, English in Bangladesh, India and Pakistan. In other cases, different colonial languages exist together in the same region, as in West Africa, which has French-speaking and English-speaking countries side by side. The former colonial languages also create bridges from one region to another. Portuguese, for instance, is spoken in Mozambique and Angola as well as in Brazil.

Some countries are, for historical reasons, part of two different linguistic realms. Tunisia, for example, is a member of the Arabic-speaking community of nations, but it also belongs to the francophone countries through its history as a French colony. Mauritius has been both a French and British colony and its population speaks both languages.

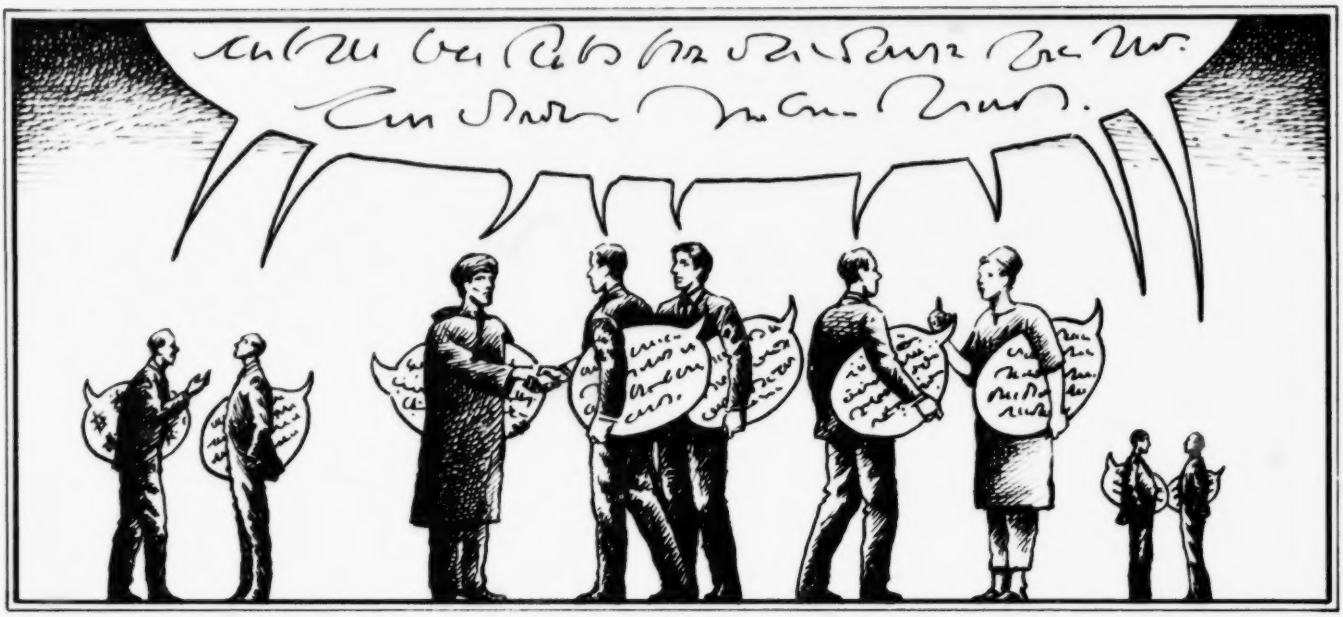
These linguistic groupings have various implications for South-South cooperation. On the one hand, they reinforce the links with the old colonial powers and often help to perpetuate a North-South flow of technical cooperation. On the other hand, they provide a convenient common medium for many countries with widely differing indigenous languages.

Where TCDC exchanges take place between countries with no common indigenous or colonial language, English is increasingly used as the medium of communication. An instance of the use of English in South-South cooperation was when two Chinese women doctors went to Turkey in 1988 to teach acupuncture to a group of Turkish doctors. They brought with them an interpreter who translated the lectures into English. This added to the cost, but without the interpreter and without the common medium of English the exchange could not have taken place. English was also used successfully when a Nicaraguan medical team, including one doctor and three technicians, was sent to India to learn the process of manufacturing and fitting the Jaipur foot, a low-cost prosthesis. In that case, no interpreter was needed. Naturally, the required level of fluency in English varies with the TCDC activity in question.

It would be unwise, however, to assume that English is always an option. Meral Orgun, senior expert and TCDC focal point at the State Planning Commission in Turkey, finds that language difficulties sometimes arise when people come to Turkey for training under TCDC agreements. "Our institutions," she says, "are asked to conduct their training programmes in English, but sometimes they fail to do so." Documents can also cause problems, as for example when her office received a compendium for a programming exercise which was written in French. This was inconvenient as few people in her agency understood French.

Developing country institutions offering training and expertise are registered in the TCDC/INRES South database in one of three languages: English, French or Spanish. Information requested on a particular institution will be supplied in the language in which it is registered, which is generally the primary language in which it operates. Out of approximately 4,000 institutions in the database, 70 per cent are registered in English. But this includes many institutions in the Arab world that register in English, as INRES-South does not currently have the technical capacity to maintain records in Arabic. Institutions registered in French make up 11 per cent of the total, while Spanish accounts for 19 per cent. Many of these institutions, however, offer training programmes in other languages.

It is not only in the obvious regions of the world that French and Spanish are offered. In Asia, 19 institutions offer training and expert capabilities in French or Spanish in a variety of subjects. The China State Construction Engineering Corporation provides training and expertise in areas including rice cross-breeding and planting, design and construction of buildings, animal husbandry, and the production of wooden furniture. Teaching is in French as well as English and Chinese. Five institutions in the Philippines offer Spanish in addition to English and Tagalog, the native language. For example, the Manuel V. Gallego Foundation College has Spanish language courses on agronomy,



agricultural business, nursing, and community development. The International Institute of Rural Reconstruction teaches community development, health care and sustainable agriculture in Spanish.

Arabic speakers will similarly find that training opportunities are not confined to the Arab region. Institutions in Bulgaria, Ghana, India, Mauritania, Pakistan, Philippines, Senegal and Yugoslavia provide training and expertise in Arabic as well as other languages. Engineer Projects, an Indian technical institution, has Arabic speaking experts in water treatment, grain storage, tuna canning and mechanical engineering. Countries they have assisted include Iraq and Kuwait.

There are also cases where a common indigenous language creates favourable conditions for TCDC exchanges between two countries. SPARTA, an Indian non-governmental organization, works closely with the Bauls, itinerant performers, who use song and dance to convey messages on development issues to rural audiences living in the border areas between Bangladesh and the Indian region of West Bengal. These performers use Bengali, a language common to both the West Bengalis and the Bangladeshis.

Native African languages are used by 18 institutions in Ethiopia, Kenya and the United Republic of Tanzania. For example, Swahili-speaking agricultural engineering and land planning experts from the Sokoine University of Agriculture in the United Republic of Tanzania have executed projects in Nigeria, Sudan and Zambia. Kenyatta University College, Kenya, offers teacher training courses in Swahili and English.

Where language can become more of a problem is in grass roots TCDC projects, where the recipients are poor or rural communities that speak only their local tongue. Here there are some useful lessons to be learned from the experience of the United Nations Volunteers (UNV).

"Volunteers for a two-year project undergo a two- to three-week intensive training course in the local language," explains William Andrianasolo, Programme Officer of the UNV Participatory Programme Development Division. "During the course they are introduced to the basics and then are able to pick up the rest of the language on the job." He adds that the host non-governmental organization (NGO) is requested to provide a co-worker who can assist the volunteer with the language as well as with technical aspects of the project.

An example is the case of Joy Navarro, a community worker from the Philippines, who was assigned to an NGO working with women's groups in a poor village in Sri Lanka. She was able to bring about change by encouraging the women to build a day-care centre which then allowed them to spend more time in income-generating activities. Learning Singhalese was essential to the success of her assignment.

The experience of the United Nations Industrial Development Organization (UNIDO) as regards the language question is also interesting. In UNIDO's South-South training programmes, the language in which a course will be conducted is indicated in advance, and participants are required to understand it. However, difficulties can arise when groups visit factories to discuss production methods with factory workers who do not have a language in common with the trainees. In such cases UNIDO tries to provide interpreters.

Clearly, it is to the advantage of TCDC institutions to be as multilingual as possible, so as to open up the maximum number of channels of cooperation. This applies, for example, to TCDC focal points. Those who speak a number of widely used languages are likely to be more effective in promoting global TCDC than those who speak only the language of their own region.

For the future, it seems likely that the direction of much South-South cooperation will continue to be influenced by linguistic ties. At the same time, there is no reason for any country or institution to be discouraged by language barriers. Even at the grass roots level the obstacles can be overcome. TCDC has come a long way since the Tower of Babel. ■

Korea Shares Its Food Technology

Korean researchers have been finding new applications for traditional food fermentation techniques. Christopher McIntosh describes how other developing countries are benefiting

Anyone who has visited Korea is likely to have tasted the fermented cabbage known as *kimchee* that is one of the country's staple foods. *Kimchee* is made by a process known as lactic fermentation, caused by the action of benign bacteria similar to those that turn milk into yoghurt. In many parts of the world, lactic fermentation has been used for centuries to preserve food, enhance its taste and keep it free of harmful organisms that can cause food poisoning. The technique can be used with a wide variety of foods including flour dough, milk, meat, fish, cereals and vegetables.

Until recently lactic fermentation had not been subjected to much scientific research. Consequently, industrial production of such foods is still relatively limited. However, scientists at the University of Korea are now eagerly studying the bacteria that cause the fermentation process. They believe that these tiny organisms may provide the solution to serious problems caused by changing dietary habits in Korea and other developing countries.

"The nutritional value of the Korean diet has been reduced in recent years," says Professor Cherl-Ho Lee of the Department of Food Technology in Korea University's Graduate School of Natural Resources. "This is partly due to the wider consumption of beverages such as coffee and carbonated soft drinks. One of the ways to help solve this problem is to make nutritious and tasty beverages from food materials such as cereals, legumes and tubers. This can be done using some of our traditional lactic fermentation techniques."

Another problem, explains Professor Lee, arises from the increased consumption of dairy products such as yoghurt. "As Korea has very little grazing land, these products have to be imported, with the result that Korea's food self-sufficiency has markedly declined. To help the situation, we have developed a yoghurt substitute made from rice and soya protein using lactic fermentation."

The findings of Professor Lee's department are now being shared with other developing countries, many of which share similar problems. This autumn the university began a training programme in food technology. The course lasts for 10 months and is open to developing country applicants with a BA in food science and a minimum of three years experience in the food industry or with a research institute. The United Nations Industrial Development Organization (UNIDO) assisted in the development of the course and helped to find suitable candidates. The United Nations Development Programme (UNDP) undertook to pay travel and living expenses for the participants.

The eight participants in the inaugural course are from Egypt, India, Nigeria, Philippines, Sri Lanka, Sudan, Thailand and Viet Nam. Hanan Elsoufi, from Sudan's Food Research Centre, is studying the effects of fermentation on millet, a staple food in her country. "Millet contains a chemical called phenol," she explains, "which causes goitre. I want to see if fermentation will reduce the phenol content."

Two of the participants in the international course on food fermentation recently inaugurated by Korea University: Hanan Elsoufi from the Sudan (*above*) and Balaraman Manohar from India.

Another participant is Balaraman Manohar, from the Central Food Technology Research Institute in Mysore, India. He believes the course will provide valuable insight into ways of applying modern technology to the production of traditional fermented foods in India. One example is *idli*, a very popular snack dish made from rice and legumes. "At present this dish is produced largely in individual homes," Mr. Manohar points out, "and the process has not been industrialized. We hope to find methods of producing it on a much larger scale."

***Above: Kimchee*, a traditional Korean dish made from cabbages, being prepared in one of the university laboratories. The fermentation process involved has been found applicable to many other foods.**

Professor Cherl-Ho Lee (*left*) and Dean Sung Bok Kim of the Graduate School of Natural Resources, Korea University.

Each of the participants has an individual research adviser. The programme consists partly of laboratory work and partly of classroom instruction, which is given in English. In addition, participants are given two hours of instruction per week in basic Korean, which they need for everyday purposes during their stay.

Professor Lee points out that the course is not simply a one-way process of instruction. "We are not only teaching but also learning. It is fascinating for us to hold discussions with the students and hear about their indigenous methods of food preparation. In this way we ourselves have gained much practical knowledge. It is the ideal form of cooperative research. After the students return to their countries we hope to continue our co-operation, perhaps through an international food research network."

The results of the research carried out during the course will be presented at an International Workshop on Lactic Fermentation of Non-Dairy Food and Beverages, to be held in Korea next June under the auspices of UNIDO and the Korea Food Research Institute.

Further information about the course in food fermentation technology and about the forthcoming workshop can be obtained from:

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TCDC/INRES-South Computers as Appropriate Technology

By Edward C. White

What constitutes appropriate technology appears to be a subject for never-ending debate. This is no less true in the field of information technology than in any other. Although we are now in the second decade of fairly widespread use of microcomputers, they still enjoy, or suffer from, depending on your point of view, the mystique of high technology.

Because of this, there is a widespread view that computers are inappropriate for many situations in developing countries. Those who advocate the use of computers in solving development problems are often considered to be excessively enamoured of gadgets and insensitive to real development needs. Use of imported high tech gadgetry, it is argued, constitutes the worst form of unsustainable development.

So how appropriate are computers for the developing world? It is well known that computers mimic nature by carrying out large numbers of very small, simple operations with great speed and deadly accuracy, which enables them to accomplish marvels of complexity. However, notwithstanding the very advanced scientific, engineering and technical mastery that led to the development of modern microcomputers, the devices themselves are increasingly easy to operate and maintain. At the same time, they can store and access ever larger amounts of data and perform complex operations on it. This makes them invaluable for development, which is often critically dependent on access to information.

A number of developing countries have now acquired the capacity to manufacture ultra-modern computer components and systems. Others have advanced the state of the art in software engineering and applications design. As evidence of this, the United Nations Development Programme (UNDP) now commissions companies in developing countries to design some of the software that it uses. These countries have had to be innovative in solving problems that do not usually arise in industrialized countries. Thus they have been able to develop appropriate solutions that can be offered to other developing countries using TCDC.

There is, of course, legitimate concern about the problems of maintaining complex imported equipment in countries that have not yet acquired high technical capacity in this field. However, modern microcomputers are durable and, if properly treated, provide relatively trouble-free operation for long periods. Furthermore, they are moving rapidly towards a throw-away technology based on highly modular construction. Indeed, some of the latest IBM and Apple computers can be disassembled and reassembled using only the fingers for tools. It is often cheaper and more efficient and nearly always easier to replace rather than repair faulty components. Someone with a comparatively modest level of technical skill can easily be trained to diagnose basic computer hardware problems, pull out the faulty parts and install new ones.

This means that countries not yet endowed with the capacity to manufacture computers or computer components may nevertheless safely embark on widespread use of microcomputers. This applies even to isolated rural areas, provided sufficient precautions are taken to stockpile the parts known to be failure-prone and to have mid-level technicians available to diagnose and replace faulty components.

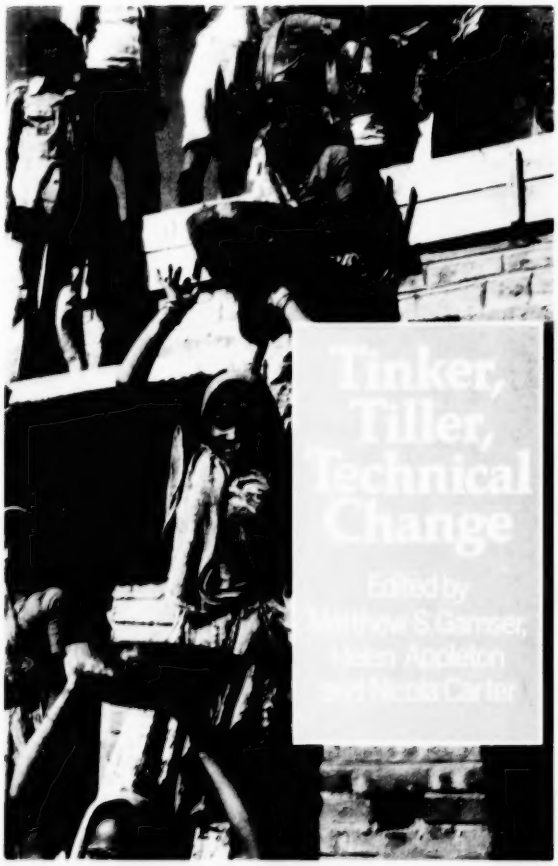
There is, of course, the problem of power fluctuations, which happen to a varying extent in all countries. However, a standard voltage regulator is usually a sufficient precaution. Even if there is a danger of actual breaks in the supply, this can be guarded against by means of a device that switches automatically to battery power when an interruption occurs, allowing the user to exit from the files without damage.

An example of the appropriateness of information technology for developing countries is the TCDC Information Referral System (INRES). This uses powerful, advanced computer equipment that makes it possible to manage a large database and to operate with speed and efficiency. Recently INRES adopted the use of CD-ROM (compact disc, read-only memory) technology. INRES installations making use of this equipment have already been set up in several developing countries, and the equipment has not posed any serious problems.

For data storage the CD-ROM is a highly attractive option for developing countries. The technology makes it possible to publish and disseminate large databases that were previously accessible only to developed countries through the use of expensive and complex telecommunications linkages. If information is power, then the CD-ROM and other such innovations in the computer field are helping to empower the developing world through appropriate technology. ■

Book Review

Technology for Development: The Southern Alternative



TINKER, TILLER, TECHNICAL CHANGE: TECHNOLOGIES FROM THE PEOPLE, edited by Matthew S. Gamser, Helen Appleton and Nicola Carter (Intermediate Technology Publications, 103-105 Southampton Row, London WC1B 4HH, UK)

Should low-income countries use modern technology from the North to catch up with the richer nations, or should they instead opt for solutions devised by themselves and more suited to local conditions? This is a profoundly important question for the future of development.

Tinker, Tiller, Technical Change, a study of local technical innovation in the poorer countries, advances the debate. The book documents numerous cases—described by experts from these countries—in which communities have responded to worsening living conditions by devising their own technological solutions. Such solutions enjoy a high success rate, in contrast to the failure of many attempts by foreign aid organizations to transfer advanced technology to poor communities. Nevertheless, even policy makers in the poor countries themselves most often prefer to adopt northern technologies rather than encourage solutions from local innovators.

Development experts are, of course, aware of the many failures in the transfer of northern technology. However, instead of examining the validity of their own systems, they often claim that poor communities are unwilling to accept technological improvements. The introduction to the book observes: "From the perspective of large and expensive 'technology-transfer' projects, the history of developing countries is a tale full of problems and short on progress. However, from the perspective of poor people and the technologies they employ in daily life, recent history shows many dramatic innovations."

Africa, often singled out for resisting technological change, has had remarkable, unnoticed revolutions in grass roots technologies. A deepening recession in the early-1980s made imported cereal unaffordable in Nigeria. In response, the book reports, local communities stepped up cassava production. Artisans developed efficient processing machines. Marketing enterprises for cassava sprang up. The national government and foreign aid agencies did little to support these changes. Yet today cassava is a staple in the diets of poor and rich Nigerians alike.

In India, commercial fishing was boosted by the purchase of trawlers in the 1960s through foreign aid. But the trawlers threatened traditional fishing economies based on inshore fishing. Bottom trawling with fine nets damaged vegetation and killed young fish, disrupting breeding habitats. Local fishing communities suffered disastrous declines in catches. In Kerala state, in southern Indian, communities responded by building artificial reefs from cement, old automobile tyres and other material. Fish breed rapidly in the reefs. Over the past 10 years, villagers in Valiyathura have built 21 reefs, which have reversed the decline in catches. Other villages along the coast have copied the reefs. "In the case of artificial reefs, what one fishing village does on reef construction is observed by neighbouring villages," the report notes.

Such examples show that poor communities are often able to meet economic or environmental threats by generating new technologies and adapting existing ones. This is rarely recognized by the development community. However, it is possible for foreign aid experts and government officials in the low-income countries to become aware of the process of local innovation and to support it. In Nigeria's polytechnics, artisans give guest lec-

tures and training sessions to students. In India, the Kerala state government is now supporting research on artificial reefs in the state's programme on science and technology. If there are too few such examples, according to this report, it is because "the process of development has to tackle the problems of ignorance, backwardness, helplessness and resistance to change—not among the rural poor but among development agencies themselves."

Many of the solutions documented in the book would clearly lend themselves to South-South transfer. Hopefully, as the innovative capacities of poorer countries come to be more appreciated, they will increasingly share these capacities with one another.

—**Siddharth Dube.**

Letters to the Editor

A Zimbabwean TCDC Institution

I would like to draw the attention of your readers to the National Zimbabwe Committee for South-South Cooperation. Zimbabwe has many problems in common with other developing countries in Africa and elsewhere. In view of the current inadequate level of aid from the North, we need to look for new ways to fuel our economic growth. An obvious one is the expansion of South-South trade.

The National Zimbabwe Committee for South-South Cooperation aims to promote southern self-reliance and to develop trade relations among developing countries. It also encourages national governments to incorporate well-defined TCDC objectives into their national development plans.

We would be pleased to hear from any governmental, intergovernmental or non-governmental institutions that are concerned with international trade and might be interested in exchanging ideas.

Leon Poza Mungofa
Secretary-General
National Zimbabwe Committee for South-South Cooperation
P.O. Box 66182
Kopje, Harare, Zimbabwe

Information Technology and Health Legislation

The December 1990 issue of *Cooperation South* contains an interesting article by Edward C. White entitled "The Information Dimension," dealing with the use of information technology to further TCDC, in which he mentions the use of the CD-ROM disc as a means of storing large amounts of data in a compact form.

Readers of *Cooperation South* might be interested to know that the Pan American Health Organization (regional branch of the World Health Organization) has developed a database known as LEYES (Spanish for "laws"), containing an index on health legislation in force in Latin America and the Caribbean. The thematic categories covered by LEYES include: public health administration, human resources in health, family health care, birth control, care of the aged and handicapped, control of substance abuse, mental health, medical ethics, occupational safety, protection against radiation, and many other topics.

The LEYES database is distributed, in CD-ROM form, to parliaments, ministries of health, universities and other institutions interested in the promotion and study of health legislation in Latin America and the Caribbean. In this way, the different countries of the region can harmonize with each other in this vital area of legislation.

Although not strictly a TCDC project in itself, the database facilitates South-South cooperation in health legislation and complements other databases, which, as Mr. White rightly points out, are increasingly vital for development.

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Courtesy of

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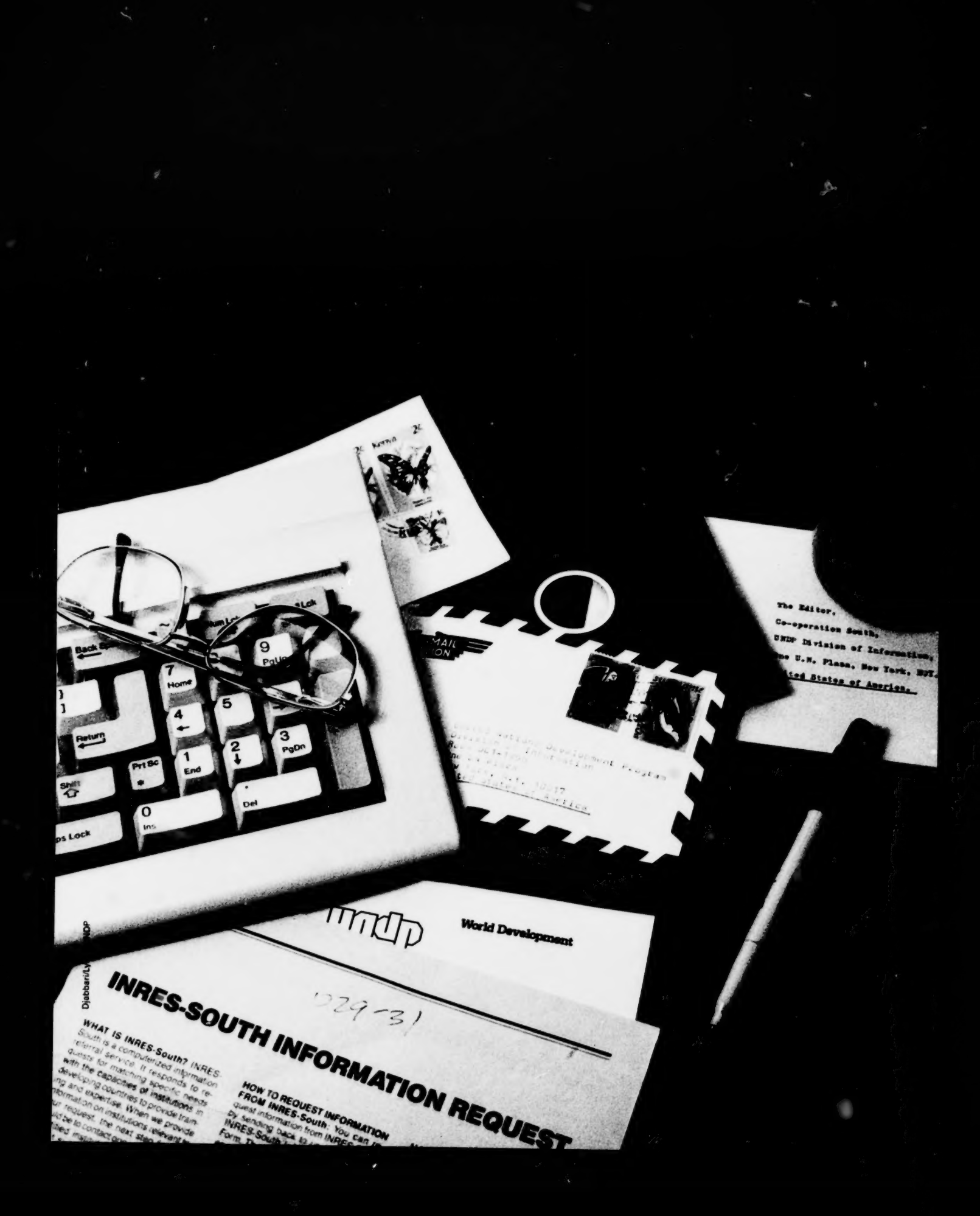
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